



November 27, 1995

David Werdegar, M.D., M.P.H., Director
Health Policy and Planning Division
Office of Statewide Health Planning and Development
1600 9th Street, Suite 400
Sacramento, Ca 95814

Dear Dr. Werdegar,

Please accept the following as hospital comments for inclusion in the *Study Overview and Results Summary* for public release with the results of the 1995 Report of Risk-Adjusted Measures of Outcomes.

Memorial Hospitals Association is appreciative of the opportunity to respond with the following comments to the second report of data from the California Outcomes Project regarding the outcomes of mortality following an acute myocardial infarction, complications following intervertebral disk excision, and readmissions following delivery for Memorial Medical Center.

**Acute Myocardial Infarction, admitted August 26, 1990 - May 31, 1992
Mortality within 30 days of admission**

For mortality after acute myocardial infarction (AMI), the observed mortality rate of 12.9% is essentially the same as the statewide outcome rate of 13%. However, in both risk adjustment models A and B, Memorial's outcome rate is higher at 14.3% and 15.6% respectively and both risk adjusted rates are well within the **expected** outcome rates given the patient's risk of death considered in the models. This finding demonstrates that the patients admitted with AMI had significant pre-existing conditions and factors that increased their risk of death. Our review of the individual records validates this finding and uncovers other factors that affect a patient's risk of death that are not captured by this analysis which only reviews coded diagnosis and procedures according to the rules of the world-wide ICD-9-CM system of coding.

In addition, the risk-adjustment models used in this Project were designed to predict outcomes for groups of patients not for individual patients. Thus other factors regarding the individual patient's number and severity of chronic conditions and individual decisions regarding continuance of care can affect the mortality rate and not be taken into account with these models.

As a result of the first release of mortality rates of AMI in 1993 and this flaw in risk adjustment, Memorial Medical Center participated in a joint study with eight similar hospitals of the outcomes of care for patients presenting with acute myocardial infarction with the objective improving our processes of care. Additionally, the pooled data of all eight hospitals was applied to three of the proposed algorithms to be used by the Health Care Financing

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Administration (HCFA) in the national Cooperative Cardiovascular Project study of Medicare patients. In this project, the data was risk adjusted through the application of multiple logistic regression models used to predict death using key indicators for the disease. These models were applied to each patient, thus each patient record has an individual calculation of risk. The patients included in our study were admitted between January and August 1994, therefore the results reflect the many current advances in the treatment of AMI that have become the standard of care since the data in the California Study of 1990-1992 admissions, such as rapid administration of thrombolytics and direct percutaneous coronary transluminal angioplasty (PTCA). In this study, Memorial Medical Center's results were:

- * Risk adjusted mortality rate of 6%, lower than the predicted mortality rate of 6.63%.

A detailed review of the records of patients who died as reported in this California Hospital Outcomes Project revealed the following:

- * the average of age of patients who died was 75.4 years with a range 61 to 97 years.

- * 40% of these patients had orders for "Do Not Resuscitate", meaning the patient or the family members had directed the physician that no heroic measures were to be instituted if required such as cardiopulmonary resuscitation. The request for no heroics does not mean no treatment; thus these patients received all necessary treatment for their acute myocardial infarction but were unable to recover due to complicating chronic conditions.

- * 50% of these patients had pre-existing conditions of heart disease, such as a previous myocardial infarction, a previous coronary artery bypass graft, and coronary artery disease.

This data from the 1995 California Hospital Outcomes Report will be used in conjunction with other activities in process or planned for quality improvement at Memorial Medical Center such as the Acute Myocardial Infarction Cooperative Study described. In conclusion, it is our hope that the above information and insight into the complication and mortality analysis of the California Hospital Outcomes Project will assist those who view the Report understanding the outcomes from Memorial Medical Center.

Sincerely,



David P. Benn
President and Chief Executive Officer
Memorial Hospital Association

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